JPRS L/10332

18 February 1982

Japan Report

(FOUO 11/82)

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APPROVED FOR RELEASE: 2007/02/09: CIA-RDP82-00850R000500030041-8

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POLITICAL AND SOCIOLOGICAL

FORMATION OF NEW SUZUKI GOVERNMENT PROBED

Tokyo YOMIURI SHIMBUN in Japanese 2, 3, 4, 6, 8 Dec 81

[Article: "Examination of 1981 Cabinet Reshuffle"]

[2 Dec 81 p 2]

[Text] Will Prime Minister Suzuki be reelected or will there be a new president of the party? The reorganization of the cabinet and appointment of party officials point toward the "Liberal Democratic Party's Showdown in 1982" which will take place 1 year hence. The reorganization and appointments give the impression of a victory for the Tanaka forces symbolized by the advent of Mr Nikaido as secretary general of the party. However, even in the case of these personnel assignments, which give the impression of a revival of the "Kakuei government," the outcome of the moves is left to be seen later on. The verdict on the All Japan Airlines connection in the Lockheed incident is scheduled for the beginning of the new year. The critical stage has arrived for administrative and fiscal reforms. Moves will be made by Nakasone (director general of the Administrative Management Agency), Komoto (director general of the Economic Planning Agency) and new leaders. It is safe to assume that, as Fukuda (the former prime minister) points out, there are "signs of general turmoil" in the political situation. We shall try to trace and examine the reorganization of the cabinet and the appointments to party posts which contain the seeds of future developments.

"There were those who said to stand firm and there were telephone calls which called me a fool or said I was tainted. I regard both as incentives for which I am grateful...."

These words of Mr Nikaido, who had put in 5 years of loyal service since being branded as a suspect official in the Lockheed incident in the Diet in November 1976. What emotions might have been in his heart as he went into the first press conference given by the newly appointed top officials of the Liberal Democratic Party just after 1230 on 30 November at Liberal Democratic Party headquarters, there was no way of knowing, at least not from his face, which showed no concern and suppressed all emotion.

Kakuei Tanaka (the former prime minister) greeted the day in very fine spirits.

"The newspapers say that Mr Suzuki (the prime minister) is craftier than Ohira (the previous prime minister) was and this is completely right."

"Mr Suzuki and Mr Nikaido are identical. Whichever is prime minister, it would be the same. (With Nikaido as secretary general) the rails are laid for Suzuki's re-election, and therefore this government will last a long time."

Tanaka reportedly fired off one comment after another in his characteristic gravelly voice to a group of visiting Diet members, which included (former minister of international trade and industry) Masumi Esaki who had been a candidate for the post of foreign minister.

At just about the same time that Nikaido was bathing in the camera lights at the much publicized press conference, another "suspect official," (former vice chairman of the Policy Affairs Research Council) Mutsuki Kato, before being persuaded of Mr Fukuda's wishes by (Hikari Fukita) (former private secretary to Nobusuke Kishi), had, in a nearby office of the Fukuda faction been on the point of drowning himself in tears of remorse in despair of getting a cabinet position.

This is a contrast between "light" and "dark" demonstrated by Nikaido and Kato. It may be possible to say that this contrast has given us a glimpse of the real nature of the Suzuki government as a system of balancing devices.

The backing of strength is with Tanaka, who is supported by a force of 106 persons; this is not to say that Fukuda's strength compares unfavorably. Nevertheless, although there is talk of a balance between Fukuda and Tanaka, this is probably no more than a typical pretext by Suzuki, who is trying to maintain harmony in the party and also to secure the ruling power.

The statement (by an executive in the Suzuki faction) that "of course the strength and number of the Tanaka faction would be important if we were looking toward re-election" serves as evidence.

There was also a self-confident statement of feeling (from an executive of the Tanaka faction) who said: "What did Mr Fukuda do at the time of the 40-day dispute or when the motion of nonconfidence in the cabinet was passed last year? From Mr Suzuki's standpoint the difference between Tanaka and Fukuda is self-evident."

At 9:30 that morning, Fukuda had a final session on the Kato question with Suzuki, who had come to pay a courtesy call at Fukuda's private residnece at Nozawa in Tokyo.

Fukuda said: "What happened to Mr Kato's receiving a post in the cabinet? There was, I believe a request made earlier."

Suzuki answered: "I want to put that off this time as far as the cabinet is concerned. I will give him a party post."

Fukuda replied: "As far as the question of being suspect is concerned, I am unconvinced by the idea that the post of secretary general of the party is open but a position in the cabinet is not."

Suzuki said: "The party and the cabinet are different."

There is pressure built up in connection with the handling of Nikaido and Kato. Furthermore, the way Suzuki has acted in regard to the handling of suspect officials, where public opinion is severely critical, can be described, as even Tanaka says, in the single word, "crafty." By cutting off only Kato, Suzuki has emphasized the issue.

Looking only at the superficial phenomena, it might seem as though "there are cracks in the Suzuki-Tanaka-Fukuda arrangement" and that "Fukuda has dropped out of the mainstream." However, Fukuda is a man of great experience who led his own government and, as Tanaka's rival, kept the Liberal Democratic Party internally divided in two for many years. He knows very well where the heart of the three factions making up the power called the Suzuki system is to be found.

One day in late September, Fukuda expressed the following views to a close associate who visited his private residence.

"With his eye on reelection, Mr Suzuki will probably increase his old leaning toward Tanaka. It is safe to assume that he will also prepare his forces for the coming storm (judgment in the Lockheed case, etc) and ask for Nikaido as secretary general of the party. Nikaido is a straightforward person and it will not matter that he becomes secretary general. 'Balance' will be the problem."

Mr Nikaido becomes secretary general by a quick, clean decision with no particular opposition within the party, while a heartbroken Mr Fukuda has been made to play a profitless role, that of seeming to have argued for inclusion of Kato in the cabinet while preaching political reform.

Later that day, far from the whirlwind blowing around the prime minister's residence and the uproar in the Diet, Mr Fukuda was riding through the middle of town in the gathering dusk. He assumed the pose, arms folded and eyes closed, which he always assumes when thinking about things, and began to listen. Reportedly, what he heard was the following radio news commentary discussing the reorganization.

"Prime Minister Suzuki's personnel actions which put Mr Nikaido of the Tanaka faction into a vital party post are unconvincing to former Prime Minister Fukuda, who had made a scene over inclusion of Mr Kato in the cabinet. It can probably be said that everything in the reorganization went Mr Tanaka's way."

[3 Dec 81 p 2]

[Text] In the final analysis, Nikaido's assumption of office as secretary general of the Liberal Democratic Party, to which (former Prime Minister) Fukuda acquiesed, had been (former Prime Minister) Tanaka's objective from the start. When did the prime minister resolve to play this dangerous card and through what process did Fukuda and Tanaka come to a tacit understanding regarding Nikaido?

On the morning of 17 October, during the (Shichikendo) festival which was held at the former residence of Shigeru Yoshida at Oiso in Kanagawa, Tanaka, who apparently had arrived early and had to wait for Suzuki who came late, disappeared with Suzuki into one of the rooms of the Yoshida residence.

The two men are said to have sat beside one another on a sofa and to have eaten candy while they talked. The conversation lasted about 10 minutes.

Tanaka said: "I am willing to cooperate with you on your reelection."

Suzuki said: "I would be much indebted to you."

Tanaka said: "However, I would like you to do something appropriate for Nikaido."

Suzuki answered: "That is no cause for concern. Please, leave it to me."

Tanaka was in good spirits. That evening he spoke to the leading people of his faction who had come to his home at Mejiro in Tokyo. "It is decided that Nikaido will be secretary general. Next year. with Nikaido, we will be prepared for the election. Then, the year after next, there will be the double election for both houses of the Diet."

The first one to catch on to the "plot" in this talk between Suzuki and Tanaka was "sharp-eared Rokusan"--(Chairman) Rokusuke Tanaka (of the Liberal Democratic Party's Polich Affairs Research Council) who belongs to the Suzuki factions. At the time, Rokusuke Tanaka observed: "It seems to have been a very important consultation. Even Kakuei Tanaka spoke freely."

The Tanaka faction, having made it definite that "Nikaido would be secretary general," turned around and began a diversionary tactic by spreading the false report that "it would be fine for Nikaido to remain in the position of chairman of the Executive Council; the question is one of having four new people in the cabinet."

The decision on the All Japan Airlines connection in the Lockheed incident was coming up. Then, the verdict on Tanaka would be given around November of next year. Finally, the prized post of secretary general had been captured to protect the party and the faction from a whirlwind of confusion. Even with great reserve, one could probably say this was very much to be expected.

Tanaka is said to have first talked about "Secretary General Nikaido" on the evening of 11 November at a meeting with (former Director General of the Defense Agency) Shin Kanemaru, (former Minister of Finance) Niboru Takeshita and (former Minister of Health and Welfare) Tatsuo Ozawa.

Fukuda tended early toward the thinking: "If the secretary general is to come from the Tanaka faction, Kanemaru would be best, but if that is not possible it will have to be Nikaido; we will not fight." However, Fukuda tried to avoid expressing this attitude in public.

This was probably because Fukuda had the faint expectation that "Suzuki might actually intend to favor Tanaka, who is saddled with the Lockheed affair, and might play the Nikaido card" (sources close to Fukuda). Fukuda repeatedly held talks about political reform and elimination of the concentration of power. Possibly because of misreadings of Fukuda's mind, false rumors circulated within the Liberal Democratic Party to the effect that "Fukuda seems opposed to Nikaido" and "Fukuda wants Abe or Kanemaru" for Minister of International Trade and Industry.

On 25 November, after (Director General of the Administrative Management Agency) Nakasone, (Director General of the Economic Planning Agency) Komoto, (Director General of the Science and Technology Agency) Nakagawa and others in the party had been convinced to accept Nikaido, a messenger came from Fukuda to the camp of Kanemaru, who was both friendly and a leading official in the Tanaka faction.

"Mr Fukuda considers that Mr Kanemaru would be ideal as secretary general; but he is not opposed to Mr Nikaido for that post."

It seems that, from the start, Fukuda did not have Abe in mind. Kanemaru declined politely as follows: "Thank you very much for your attitude. However, there is a question of seniority involved in the matter. The stability of the faction will be upset if Mr Nikaido is not chosen."

The messenger then reported Fukuda's wishes to Nikaido.

It will have to be Nikaido; we will not oppose Tanaka again. This "harmonious" reaction on Fukuda's part at this time is not necessarily complete acceptance of the status quo.

Looking at the undercurrent of "great confusion on the earth," of which Mr Fukuda speaks, one has a lingering sense of the fact that he alone has not stained his hands in any way in the playing of the Nikaido trump card, which could have good or bad consequences.

It is not without reason that the Tanaka side is wary. They say: "In the future Fukuda must be watched."

[3 Dec 81 p 2]

[Text] There are two keys to understanding the secrets in the heart of (former Prime Minister) Takeo Fukuda which eluded those who had expected the old fight between Fukuda and Tanaka to flare up again. One is the idea of "dealing with all internal and external situations with the whole party as one entity" which Mr Fukuda never tires of repeating. The other is the long-cherished desire for a "restoration" of Fukuda which is still at work deep inside the political world.

(Director General) Ichiro Nakagawa (of the Science and Technology Agency) analyzes, as follows, Fukuda's attitude in accepting Nikaido as secretary general of the Liberal Democratic Party:

"He is tired of fighting. In the 40-day contest the year before last and at the time of (then) Prime Minister Ohira's death, Fukuda provoked the fight. Mr Fukuda is probably tired."

Mr Nakagawa himself seems to have had a secret blueprint in the early stages of the drama of this reorganization. According to people connected with him, the blueprint was this:

"If the Tanaka faction proposes Nikaido as secretary general, the Fukuda faction will push Shintaro Abe for Minister of International Trade and Industry as a rival candidate. The two will cancel one another out and (former Director General of the Defense Agency) Kanemaru, who is a leading official in the Tanaka faction, will rise quickly to the surface.

Nakagawa approached Fukuda and Kanemaru, the person selected, with this concept. However, Kanemaru, having learned from experience in friction with (former Prime Minister) Kakuei Tanaka, did not go along with the idea, and Fukuda reportedly only laughed.

Last year at the time of the elections to both upper and lower houses of the Diet which were complicated by the passage of the resolution of nonconfidence in the cabinet and the sudden death of Prime Minister Ohira, there was a conspiracy among Fukuda, (former Prime Minister) Takeo Miki, (Director General of the Economic Planning Agency) Toshio Komoto, Nakagawa and Abe.

It is said that with the idea of a new party organization this conspiracy had gone as far as primately deciding on a lineup which would have had "Komoto as president, Abe as vice president, and Nakagawa as secretary general." Fukuda and Miki had been expected to hold posts as advisers. However, this plan, too, which went to the very last moment, was utterly destroyed by a word from cautious Mr Fukuda.

Fukuda said at one point: "It would be awkward to fight. Please wait until Mr Ohira has been dead for 49 days." It is safe to say that in these words there was already an original image of Mr Fukuda's psychology in not opposing Nikaido to the point of engaging the Tanaka forces in a fight.

Despite repeated disavowals by Fukuda, the argument for his restoration is deep rooted and does not go away. The more Suzuki and (former Foreign Minister) Sunao Sonoda commit blunders in foreign affairs, the sharper the jabs from sympathizers (former Prime Minister) Nobusuke Kishi and Fukuda. "We will have a post-Suzuki transition from Tanaka to Fukuda." "Suzuki seems to intend to keep going. He will have to learn his place." (Kishi)

(Chairman Rokusuke) Tanaka (of the Policy Affairs Research Council), who is a member of the Suzuki faction but is also close to Kishi, has given warning signals about these symptoms and has urged Suzuki to be careful. He has told Suzuki: "(Mr Fukuda) is very interested). He will be dangerous next year."

While Kanemaru is a leading member of the Tanaka faction, he is a person whose sympathies are more with Fukuda than with Suzuki. He certainly senses this whirlwind of speculation which surrounds Fukuda and, on 7 November, finding himself sharing a seat with Fukuda on the Bullet Train, he pressed for information.

Kanemaru said: "There is someone who came to me and said that Suzuki is bad for Japanese-American and Japanese-Korean relations and that you would be the best in these areas. What this person says...."

Fukuda said: "Japanese-American and Japanese-Korean relations are worrisome and this cannot be helped. However, at this time the whole party should work as one rather than create a commotion."

Kanemaru's decision at this point in time was" "That is not what he wants." However, there is a year left before the party president's term expires next November. But what if the political situation were to be convulsed by difficult problems in foreign affairs and the verdict in the Lockheed affair, Suzuki were to falter and,

on top of that, moves by Komoto and (Director General) Yasuhiro Nakasone (of the Administrative Management Agency), who are aiming at a post-Suzuki government, were suddenly to be compounded? There would be no basis for nipping a restoration of Fukuda in the bud.

What would the largest force in the party do then about its obligation(?) to Fukuda, who quietly allowed Nikaido to become secretary general? The choice which Fukuda make in these personnel assignments contains many possibilities.

Miki, once Fukuda's staunch friend, is now thinking very hard: "So, Fukuda made no move. Then there is something fishy."

[6 Dec 81 p 2]

[Text] Did (Prime Minister) Suzuki's heart ever waiver after he had settled with (former Prime Minister) Tanaka on 16 October (at the Suzuki-Tanaka talk at (Shichikendo) that Nikaido was to be secretary general of the Liberal Democratic Party? It is probably correct to think that Suzuki did waiver.

This would have been during the period following the shocking testimony of Enomoto's former wife (26 October) regarding the Lockheed affair and the Osano verdict, which left a premonition of a conviction in Tanaka's first trial.

"That is distressing," said (former Minister of Health and Welfare) Kunikichi Saito, a leading member of the Suzuki faction. If Saito was nervous about what (former Prime Minister) Fukuda's side would do, the fact was substantiated when speculation circulated from those around the chief cabinet secretary, Miyazawa, who said: "The prime minister is worried about public opinion," and "now Nikaido is finished."

Fortunately for Suzuki, Fukuda was in Beijing just at the time Enomoto's former wife appeared in court as a witness.

The situation was right for blocking Nikaido but, besides being absent, Fukuda had no means of breaking through the common front presented by Suzuki and Tanaka. Suzuki, who sensed that, public opinion aside, the spirit of opposition to Nikaido inside the party was extremely weak, suddenly became bullish.

In mid-November, he had the following conversation with an old friend who had come to visit at his home in Tokyo.

The friend: "There are too many problems involved in using Nikaido. The judgment on the All Japan Airlines connection with the Lockheed affair and the verdict on Tanaka will probably take place next year. Can you get through that difficult situation with Nikaido at the forefront of the party?

Suzuki, facing to the side, said nothing.

The friend: "Would you, as prime minister looking for reelection, not be hurt, too?"

Suzuki: "It is all right. Nikaido has suffered as he has (because of the question of being suspect in the Lockheed affair). Is that not enough?"

Suzuki's firm resolve was in time communicated to Fukuda, of course, as well as those such as (former Prime Minister) Miki and (Director General of the Science and Technology Agency) Nakagawa who are inclined toward rebellion.

For Suzuki, then, was the selection of Nikaido a matter of accepting, without recourse, an order thrust upon him by Tanaka? On the evening of 21 November a leading member of the Suzuki faction talked about the situation in this regard.

"From the prime minister's point of view, the big problem is the existence of the Fukuda-Tanaka situation. Moreover, Fukuda wants very much to return to power. On the other hand, the Tanaka faction has its hands full with the Lockheed affair. In such a case, was the best policy not to aim at reelection by promoting Nikaido for the secretary general's position? Nakasone and Komoto are not considerations."

This is not the only thing in the picture. In Nikaido, Suzuki will have a powerful weapon who is close to (Chairman of the Komeito) Yoshikatsu Takeiri and (Chairman of the Democratic Socialist Party) Ryosaku Sasaki and who can talk frankly with them about a political reorganization which would include the Liberal Democratic Party and political centrists.

The roots of plans of this kind of Liberal Democrats and centrists go deep. (Former Prime Minister) Ohira and Suzuki both participated in this plan with Nikaido in the past. Bearing in mind the difficulties of the past, the 40-day struggle and the passage of the resolution and nonconfidence in the cabinet, might Suzuki not have confidently played the trump card of making Nikaido secretary general, with the idea of getting sufficiently in step with Tanaka and then also drawing the political center into his camp to stabilize the political situation?

If this were accomplished, the chances for Fukuda's coming back would be dead, and even on the brink of a breakdown in the party, danger could be avoided.

Nikaido does not try to say a lot about contacts with the political center; he merely says: "We live in the same Japanese economy, so...."

On 27 November, (former Prime Minister) Nobusuke Kichi, who is close to Fukuda, erupted in criticism of Suzuki, who had moved ahead with a bold strategy for reelection with Nikaido as his trump card in the post of secretary general.

"Why make personnel changes? I do not understand the reasons. It is fine to replace (previous Foreign Minister) Sonoda because his thinking is not in agreement with Suzuki's or if there is some other purpose, but...."

"So Suzuki is still at it. Next year he will have been in office 2 and 1/2 years. That has to be considered unexpected good luck."

It may be that Suzuki, who has looked not only within his party but also among the political centrists, is the one who clearly sees into the mysteries of the current era.

[8 Dec 81 p 2]

[Text] It was 1 pm on the afternoon of 29 November, the day before the reorganization of the cabinet. (Chairman of the Liberal Democratic Party's Policy Affairs Research Council) Rokusuke Tanaka was watching the television program Amateur Singers on the Air, when his telephone rang.

"Is that you, Rokusan? I want to ask you to be chairman of the Policy Affairs Research Council this time."

Then, on the other end of the line, Prime Minister Suzuki explained the schedule of the Liberal Democratic Party's Executive Council which would decide upon the three new people for the party's top posts. Rokusuke Tanaka, however, could not hold back a flood of tears and was in no condition to hear any more of what Suzuki was saying.

"I will remain in my post (as Minister of International Trade and Industry) or I will take the post of chairman of the Policy Affairs Research Council or, at worst, chief cabinet secretary. Just watch!"

"I, too, am a politician. Whether at Shiroyama or at Tawarasaka, when the time comes to act, (like Saigo Takamori) I will act."

Tanaka had not stopped making public statements, but it is safe to say that he had had a series of uneasy days filled with equal parts of confidence and anxiety while his rivals in the Suzuki faction, Chief Cabinet Secretary (Kiicki) Miyazawa and his uncle (Minister of Education Heiji) Ogawa, even tried to hold him in check by saying" "Rokusuke will neither remain in his post nor get one of the three top party positions. The most he will get is chairmanship of the Diet Policy Committee."

Disorder in the Suzuki faction, both in terms of "disarray" and in terms of the rivalry among Miyazawa, Ogawa and Tanaka, had been the laughing stock of the other faction. It had been so serious that there had been such speculation as the remark: "Rokusukie has been bragging that Ohira was a threat to (Maeo) and Suzuki was a threat to Ohira; this is a tradition (of the Suzuki faction)."

Suzuki was crafty enough to read the undercurrents within the party and successfully carry off personnel assignments in which, just as he intended, he boxed in the new leaders, not to mention Nakasone and Komoto, by pushing through the appointment of Nikaido as secretary general of the party. The confusion on his own doorstep, which is in contrast to his success, can only be called strange.

However, for Tanaka, "a new leader who started late" (a senior without a faction), this was a critical juncture. If he were at this point to be left without a post, he could be forced to dissolve the "New Generation Research Society" which he had formed by drawing together middle level and younger members since he attained the rank of Minister of International Trade and Industry.

On 25 November, he went by himself to Suzuki to plead.

(Rokusuke) Tanaka: "Today I have come on my own behalf. You have never seemed more distant than at this time. I have never said about Mr Miyazawa or Mr Ogawa that they should have no posts at all. Is it not abusive for them to be saying this?"

Suzuki: "I understand, Rokusan. I will not do anything bad."

They talked about shared memories of the days of the Ohira cabinet and about topics which had been current when the Suzuki government was formed; according to people close to the two men: "It was a conversation in which they shared the joys and sorrows of life."

Was this direct appeal by Tanaka effective or was Suzuki overwhelmed by the strength of the "Rokusuke faction" (Ogawa's term) which was ready to bolt from his fold if ignored?

Whatever may be the correct answer, on the evening of 25 November, Suzuki held a 1 and 1/2 hour telephone consultation with his chief lieutenant, (former Minister of Health and Welfare) Kunikichi Saito, and in the classic sense of the tail wagging the dog, the selection of Tanaka as one of the three top party officials was made (as Saito said) "for the sake of peace and solidarity in the faction and for the purpose of being the party president's faction once again."

It can probably be said that Tanaka's ability to act and his sense of anticipation on the battlefield bore fruit; Suzuki's choices for the post of chairman of the Policy Affairs Research Council were reportedly Miyazawa first and Ogawa second.

The aftershocks continue even after the reorganization of the cabinet. On the afternoon of 2 December, senior members of the faction, Iwazo Kaneko, (Naganori) Koyama and Ippei Kaneko gathered in the Suzuki faction's office and joined together in censuring Saito. They said: "Assigning personnel along the Saito-Rokusuke line is no good." "At this rate, the Suzuki faction will end up being taken over by the Tanaka faction." (Note: Saito and (Rokusuke) Tanaka are close to former Prime Minister Tanaka.)

Thus went the "30-day struggle" (former Prime Minister Fukuda's term) over personnel selections which befell the Suzuki faction. There is no proof that the situation will be settled later on when the faction approaches the moment of truth in the issue of Suzuki's reelection. This, in a sense, is a posture symbolic of the Liberal Democratic Party, shaken by the emergence of new leaders.

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SCIENCE AND TECHNOLOGY

RECENT JAPAN-COMMUNIST BLOC BUSINESS DEALS REPORTED

Soviet Robot Trade Fair

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 5 Dec 81 p 6

[Text] The Soviet government has recently determined to hold an "International Industrial Robot Fair" this coming October in Leningrad, and has strongly urged attendance upon various Japanese industrial robot makers. Originally, it planned to hold a "Japanese Industrial Robot Fair" in Moscow, but this idea was modified and changed to a fair with participation from countries all over the world. This will be the largest scale robot exhibition ever held in the communist sphere. Japan's robot makers see the prospects of concluding large scale deals as excellent, and are ready to accept the invitation with enthusiasm.

The planned Soviet robot fair will be held for 10 days, from 18-27 October 1981. Exhibits are expected to include manipulators and higher level robots, FMS (flexible manufacturing system) and CAD (computer aided design) systems which use robots, and related components and jigs and tools. Varieties of robots comprise the whole range from welding and painting robots to transporting, assembly, and inspecting robots. Additionally, displays of "specialty robots" for the mining, civil engineering and construction, agriculture, and transportation industries are also requested. There is a particularly great interest in intelligent robots.

Japan's robot makers were previously informed by the Soviets through the Japan Industrial Robot Manufacturers Association (Yoshio Ando, president) that the Soviets are going to sponsor the "Japanese Industrial Robot Fair" and they wish as many Japanese companies as possible will attend. Now, the Soviets have considerably expanded this undertaking beyond the original proposal, and formally requested the association to participate. The Soviets have invited participation by 36 Japanese robot makers, including Kawasaki Heavy Industries, Yasukawa Electric Manufacturing Company, Hitachi, Ltd, and Fujitsu Fanuc, and have appended a list of items they would like displayed.

The Japan Industrial Robot Manufacturers Association is polling its members as to whether they plan to attend. As it is expected that the number of participating firms will be large, the association will ask the Japan External Trade Organization (JETRO) to be a point of contact and take necessary procedures for the exhibits. The association is planning to ascertain by the end of this year as to how many firms will attend the fair and to inform the Soviet government of this next spring.

Japan is, literally, the "robot kingdom," possessing about 70 percent of the world's robots. Consequently, the Soviet government has taken note of this robot technology, and has proposed technological exchanges with Mitsubishi Heavy Industries. However, so far as the export of robots is concerned, only Kawasaki Heavy Industries has once delivered a large number of robots for automobile factories. After that there are only isolated examples of the export of a small number of robots. The probability seems high to the Japanese firms that, since this is an untouched market, the fair to be held in Leningrad next fall will be an opportunity to inaugurate export deals with the USSR with one effort.

FMS Export to Bulgaria

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 5 Dec 81 p 1

[Text] The first large export deal for an FMS (flexible manufacturing system), which might be called the manufacturing system of the future, has come to Japan from Bulgaria. According to industry sources, the Bulgarian Ministry of Electronic Machine Manufacturing has made a purchase inquiry with Hitachi Seiki Company, Ltd, a major maker of manufacturing machinery, about a large scale FMS centered on 30 MC (manufacturing center), a compound manufacturing machine, and including automatic conveyors, computer systems, and so on. Hitachi Seiki's aim is to win the contract for the first large scale FMS plant transaction by relying on the cooperation of Fujitsu Fanuc, Ltd, in the field of automatic conveyors, centered on NC (numerically controlled) devices and industrial robots.

The Bulgarian Ministry of Electrical Machine Manufacturing intends to install this FMS in a computer component factory in Sofia. Hitachi Seiki is sending a technical report, including a blue print and a system layout, concurrent with negotiations involving a visit to Bulgaria by company president Idegawa Kinroku. They are going to work out the details of the price and conditions of payment in future, but when the contract is made it is expected that the value of the order will be around 3 billion yen. According to machine tool industry sources, there have been several deals for small scale FMS centered on two or three MC, but this is the first large scale system of this sort. The distinctive feature of the FMS is that once information concerning 1 day's manufacturing processes is entered in the computer, instructions are issued for each product with the mere push of a button and 24 hour production completely without workers is possible.

FMS systems have gained popularity in Japan after the completion in January of this year by Fujitsu Fanuc of its Fuji plant (Yamanashi Prefecture), the pioneer in all the world of mass production of robots, and Japan leads the world in the FMS field.

The Bulgarian government intends to construct a model FMS factory, hoping to upgrade production through rationalization of and increase of energy-saving measures at factories, and has come to make an inquiry with Hitachi Seiki, which exported five MC to Bulgaria in the past.

However, Hitashi Seiki does not have an automatic conveyor system, nor a computer system which has industrial robots as its essential system. In contrast, Fujitsu Fanuc is strong in computer technology, which is at the heart of NC, and robot technology and, moreover, in the autumn of last year established in Sofia in equal partnership with the Bulgarian government "Fanuc-machinex" and established systems for servicing of NC devices already in place.

Because of this Hitachi Seiki is determined to obtain the full backing of Fujitsu Fanuc and, president Idegawa Kinroku will soon begin top level talks with president Inaba Seiuemon aimed at a structure for a joint order.

FMS: A production system for automatic production on one line of small quantities of varied items, combining industrial robots based on computers and NC production machines.

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CSO: 4106/33

SCIENCE AND TECHNOLOGY

U.S., JAPANESE SEMICONDUCTOR INDUSTRIES COMPARED

Tokyo DENSHI GIJUTSU in Japanese Vol 23 Nos 12 and 13, Nov 81

[Article by Hiroshi Semi]

[No 12 pp 78-80]

[Text] Recently, the strength of the Japanese electronics industry has become embarrassingly evident. For example, you can see it in the report recently issued by the McIntosh Company (Table 1).

According to the report, in the world trade market dealing with electronic products in the eighties, only the United States and Japan are on the plus side, that is, have an excess of exports, while the European nations and other free world countries are on the minus side, that is, have an excess of imports. Another point that draws attention is that the balance of the United States, which is on the plus side, is showing a downward trend. That implies that the margin of favorable trade balance is yearly being shaved off.

That probably leaves only Japan to continue to enjoy the "spring of life" and to be merry in the world market. Japan alone is predicted to continue to have excess exports in the coming 10 years as far as international trade in electronic products is concerned.

On the international market, only the made-in-Japan electronic products are on top, far above others in the spotlight. The results of this solo performance are plainly foreseeable. Various international disputes involving preeminent Japan are likely to be invited.

The disputes are expected to be highly visible, especially between Japan and the United States, the two countries with a favorable international trade balance. It is a matter of course that a strong Japan should be taxed for its success. That shows not only how the United States but all other countries in the world appreciate the operation of Japanese industries and have great expectations of us.

On the other hand, the myth of Japanese operations that support a strong Japan particularly attracts the interest of Europe and America. Giving a clear definition from a very limited field of vision, what attracts them is the secret of our industrial productivity which spews out a mass of good, reliable products exactly as planned and scheduled. Is it also the mystery of the actual production lines which makes the renowned productivity possible that interests them?

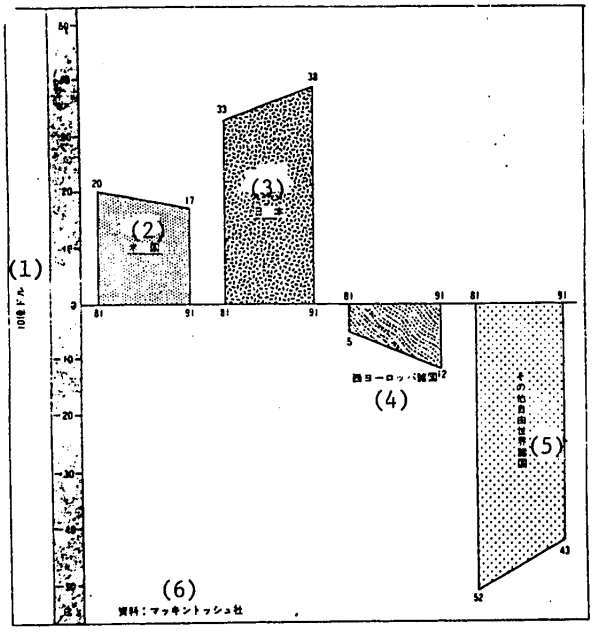

Figure 1. Trade Balance of Electronics Products (1981-1991)--1980 U.S. dollars

Key:

1. 1 billion dollars
2. United States
3. Japan
4. West European nations
5. Other free world countries
6. Source: McIntosh

Businessmen, engineers and even working operators frequently visit Japanese corporations with irresistible fascination and keen interest to elucidate the secret and mystery of Japan. What they learn or hear at the host companies is no more than a total quality control system (TQC) and QC circle activities thriving at the working level. These systems are not particularly new to the visitors, and when you think of it, they originated in Europe and America. Initially, we imported the idea. When they understand these basics, they feel relieved for the time being.

Japan does not have any undisclosed mystery or secret. It does only what it is expected to do to bring forth "high quality" products. Thus, the visitors analyze to convince themselves.

However, when they go back to their own countries, they are suddenly at a loss. It is not that difficult to restore and implement the various systems practiced in Japan in their own companies. But they notice that an important point has been overlooked when they actually try to implement the systems. They discover that they failed to understand the root of the success of the total participation system extensively practiced in Japan. It appears that the Japanese side is partially responsible for this. That is, we do not teach them the spiritual aspect of the matter that supports the success of various participation systems in Japan. To be more accurate, there are few people who can handle the teaching to that extent.

Giving another example, here is a story that illustrates these problems. Some 250 Japanese companies have already advanced into the United States and employ almost 50,000 Americans. If the Japanese business operations are as great as has been said, at least the majority of the Japanese companies that have advanced into the United States should be making products equal to the level of products produced in the mother country and be operating with a comfortable profit. However, as far as I know, the majority of the Japanese companies there have, on the contrary, encountered problems and are busy trying to straighten them out.

Probably, the foundations or climates that support the business operations in the United States and in Japan are different at many points. That is the question being raised in the minds of the people who visited Japanese corporations and returned to their own countries. If it is true that there is a large difference, an absolute difference, in foundations between Japan and the United States, then it is appropriate to think that this difference accounts for the high quality and reliability of the Japanese products.

It is impossible to give an all-round profound analysis and solution in this limited space relating to the reasons why Japanese electronic products have reached a level of excellence far above all others in the world. That must be left to another opportunity for discussion.

At this time, however, the discussion will be focused on a comparative analysis of Japan and the United States in the semiconductor industries which support the electronics industry in association with the above described sense of problems.

In order to facilitate the understanding of the readers, the discussion was divided into 11 points of view for convenience (Table 1).

Status

As is well known, the American semiconductor business dominates over 65 percent of the world market today. That figure was estimated to have been over 80 percent 10 years ago. In contrast, the Japanese camp holds about 22 to 24 percent of the market share.

The European business hold is less than 10 percent, and the rest is claimed by the semiconductor business of each nation spread out over the free world. However, these enterprises in one way or another have introduced technology from American, Japanese or European businesses. It is unquestionable that the United States actually presides over the world market.

Incidentally, the size of the world market today is approximately 3.5 trillion yen in terms of annual average, slightly over the sales realized by Japan's Toyota Motor Company alone.

Industrial Structure

There is a great difference between Japanese and American semiconductor industrial structures. This stems from the difference in the developmental process in which the semiconductor industry in each country was created and raised. In a word, it is the threefold structure of America versus the onefold-plus structure of Japan.

The threefold structure of the United States can be observed by looking at a vertical section of the U.S. semiconductor industry. The onefold plus structure of Japan is also conceived on the same basis. A comparative analysis can be made disregarding the impact on the activities and structures of foreign affiliates residing in each country.

The threefold structure of the United States is supported by a strong base. It is a strong system house, i.e., a group of makers independently manufacture goods, as represented by IBM and Western Electric. These corporations are called inhouse makers. The power of inhouse makers has been steadily organized in recent years. This is because the major electric makers which were compelled to retreat from the semiconductor industry in the past have returned again.

The means of reentry can be the purchase of an existing semiconductor business or capital participation. GE and Westinghouse are typical examples. French oil capital, Schlumberger, and the greatest of the American military industries, United Technology, accomplished their entry into the semiconductor industry by purchase. The companies they bought out were competent semiconductor corporations such as Fairchild and Mostech [phonetic].

It looks like "bring semiconductor development and production ability to the company" will become the password of the world's big corporations.

Table 1. Comparison of Japan-U.S. Semiconductor Industries

	United States	Japan
1. Status	almost 65%	in excess of 20%
2. Industrial structure	threefold	onefold-plus
3. Business operation	profit oriented (cost reduction)	market oriented (market share)
4. Main constituents	primarily specialty makers (venture business)	general electric machinery and communication machinery makers (consistent system house)
5. Technology	pride of originator (IHA idea)	sense of new establishment
6. Production	design/technology innovation (stressing mass production)	perfection of fabrication technology (stressing yield)
7. Quality	principle of passing inspection	perfectionism
8. Competition	offensive to defensive	defensive to offensive
9. Product	strong in microcomputers for military industry	strong in memories and IC for civilian use
10. Business strategy	one step ahead in multinationalization	heading for multinationalization
11. Role of government	frequent bolstering	protection and nurturing

[No 13 pp 73-75]

[Text] The second layer of the industrial structure (continued) is the companies which deal with outside sales, generically called merchant makers. They are headed by Texas Instruments (TI) and include National Semiconductor, Intel and Advanced Microdevice which all have a main office in Silicon Valley, and Motorola which maintains major production activities in Arizona, otherwise known as Silicon Desert.

In the past several months, the merchant makers have been kept busy reviewing the long- and medium-term growth strategies of their own companies. In 1981, the shipped commodities of the American semiconductor business was minus 5-10 percent, compared to the previous year (in terms of money). This is due to the unexpectedly long-lasting slump. However, this is expected to get on the track of mild recovery in 1982, leading to a big growth in 1983 and 1984....

Up until the beginning of autumn last year, it was predicted that 1982 would be the year of a demand boom (see December 1980 issue--American Semiconductor Industry in Recession). As the American business condition hits a second bottom, the prevailing opinion now predicts that the next demand peak will arrive later in 1983.

What gives a headache to the top management of the semiconductor business is how to tackle the promised market growth. The factors that cause the headache can be boiled down to two items.

One is the procurement problem to meet plant and equipment expansion. In order to procure sufficient funds, it is necessary to earn profits that make the procurement feasible. From this aspect, it must cut off unprofitable sectors that pull down some industry groups and products that do not grow as expected in the near future. Then, it must concentrate on the product groups considered real winners and continue to invest in plant and equipment at the proper time.

Another problem is the shortage of engineers, which is becoming more serious every year. Even if management can cope with this problem, the product battlefront must be organized and the resource of engineers in one's own company must be effectively utilized, when it is self-evident that the business has expanded out of control.

Funds, manpower and profit ratio and growth of products in the near future must be balanced. As a result, once in a while decisions that surprise the industry are made and announced by the leaders of the semiconductor business. A good example is the recent retreat of TI and National Semiconductor from the magnetic bubble memory business. This decision was made as a result of reallocating operational resources preponderantly in order to pursue the promising silicon technology.

The third layer is composed of venture business groups characteristic of the American semiconductor industry. Today's Intel and National Semiconductor also started originally as venture businesses. Venture businesses flirting with venture capitalists are pushed up into a full fledged business in no time.

Such a business climate or foundation is never found in the semiconductor industry of Japan. Many Japanese versions of venture business companies have been raised in the software field of the computer industry. However, the people and institutions that serve the function of the American venture capitalists are absent. This absence is deeply felt when one appreciates the role played by the venture capitalists who are very active in Silicon Valley.

Concerning the role of the capitalists who continue their activities with the valley as their base of action, several characteristics can be pointed out. The most important characteristic is that almost all of them have had experience in operating a high technology business with their own hands at one time or another in the past. Also, they participate as one of the managers in the business for which they have raised the funds.

Capitalists with these qualifications can hardly be found in Japan. A "onefold-plus structure" pattern characteristic of Japan is quite a contrast to the pattern of the United States. The Japanese semiconductor business is predominantly run by companies which are characterized as general electric machinery and communications machinery makers or as general home electric businesses. Part of the semiconductor products are always consumed in the company itself. They may be regarded as a group of businesses which combine the corporations in the first and second layers of the American semiconductor business structure. Furthermore, many of them are "big businesses."

The "plus pattern" comes from the fact that a very limited number of semiconductor specialty makers are part of a circle dependent on these big corporations.

In recent years, the number of so-called inhouse makers has increased, but the scale is not as large as the traditional American inhouse makers such as IBM and GE.

Business Operation

There has existed a basic ideal or strategic difference between Japanese and American business operations. American business has primarily been profit oriented, while our business has been market share oriented. In the American market, free and fair competition has been unfolded under the banner of reduction of cost. In contrast, the origin of our business has been the improvement of the market share.

These differences in strategy or basic attitude are closely related to the backgrounds from which the semiconductor industries emerged and the form of the progress in both Japan and the United States. In the United States, which was the revolutionist of the world's semiconductor industry, the military market was enormous at first, but the dependence on it was greatly reduced, for example, in the seventies as far as IC is concerned.

In the United States, where the market was developed for military use with the backup of the Pentagon (Department of Defense), a tremendous number of corporations entered into the business with the expansion of the civilian market. This phenomenon of participation was given further impetus by the basic climate of the American business operation favoring freedom of occupation and traits that encourage a free and independent spirit (pioneer spirit that challenged the frontier).

Naturally, the competition became more ruthless with the increase in the number of companies entering the industry. "Price" was unquestionably the bottom line for acquiring the position of ruler in the market where the competition was intense. On the other hand, a habit of stressing "profit" for every quarter term, characteristic of American business, stubbornly remained.

The outcome is obvious. Feverish pressure was applied to reduce the cost. Cost reduction was pursued in relation to the "product quality" demanded by the customers. Maybe because of this, the basic theme of quality control was strictly narrowed down to the principle of passing inspection.

Severe price competition required creation and expansion of the market. As a result of the drastic reduction in the IC price in a short period, new markets were opened. Also, the markets expanded at an unexpected speed. Meanwhile, the competition cost many victims in the early 1970's, which meant a retreat of many large corporations from semiconductor production.

Japanese business operations, starting late, are different in many ways from the phenomena seen in the American market. Unlike the United States, where nearly 200 semiconductor companies fought for a market share, the big corporations took the lead from the start in Japan. No one rushed into the semiconductor industry dreaming of a bonanza.

Centered around competition with a sidelong glance at other companies, the competition was unfolded primarily stressing product quality to catch up with others. Various inventions and efforts were constantly being made to lose no time in catching up to the level of the forerunner, the United States. Greatly helpful was the attitude of American business, which generously disclosed technologies to a considerable extent as long as patent fees and knowhow fees were paid.

What the Japanese corporations, which were the late starter, aimed at was perfect product quality. In the beginning, the cost was high, but this was absorbed by the demand from within the company. Through efforts to eliminate the immense patent fees, noteworthy patents of one's own company were originated.

A vehement price battle has developed in the course of time. The battle is waged on two fronts, one against American corporations and the other against domestic corporations.

Setting aside the IC's consumed within the company, a seemingly contradictory demand for "inexpensive and good products" had to be accommodated in the Japanese market structure, where the civilian market ratio was comparatively high. The solution to satisfy these two demands came down very roughly to two points. One was the insatiable automation of the manufacturing process, and the other was the catch-up attitude with everyone taking part, the pursuit of TQC (total quality control) in today's terminology.

The essence of operating with a sidelong glance is the principle of not being defeated by other companies in equipment investment and technology development. The greatest parameter to judge the result of the competition is the fluctuation of the so-called market share. The complete industrial statistics of Japan relate the cruel fact of the market share of one's own company.

Main Constituents

The following main constituents played different roles in the stage of industrial development in the United States. The main constituents that created the semiconductor industry were the world's predominant research institute, Bell Laboratory and the Western Electric group.

The credit for the mass production of the technology developed can be given to semiconductor specialty makers which started from venture businesses. Several technological developments were required before the semiconductor business could be shaped into an industry and get into smooth running order.

Aside from Bell and the Western group, technological development in the initial period was explored by large corporations such as GE and RCA. Except for the period of foundation consolidation, venture businesses with TI and Fairchild in the center served as the driving force to promote technical innovation. Especially noteworthy were the Kirby patent of TI and the Planer patent of Fairchild.

The main actors in the Japanese industry were general electric machinery and communication machinery makers from the very beginning. It was these corporations that promoted research and development and started mass production. A specialized developmental pattern as seen in the United States is totally absent. It cannot be denied that the tailing type Japanese business operation benefited in various ways from the difference in the main constituents as described above.

Technology

The idea that penetrates most into the American semiconductor industry is the acute sense of being the original manufacturer, the pride that the invention was made there. That sometimes rebounds as an unexpectedly arrogant attitude toward customers. It is because of this phenomenon that we hear complaints that an American business, trained well in the home of marketing, sometimes acts too aggressively in trying to impose the products of its own company and forgets that "all customers are kings" when it attempts to sell its products to Japanese users.

In comparison, Japan's sense of new establishment had solidified. Although we felt small in face of the originator at the beginning, we started to become confident about certain products as we caught up in the technology and further established mass production technology.

In the past couple of years, Americans have begun to make some remarkable statements regarding the reliability, quality and stability of Japanese IC memories in particular. Some American business managers have come forward to warn the American corporations which indulge contentedly in the pride of being the original manufacturer. These managers have the experience of having worked as a high class administrator in Japanese business or have often visited Japan. Or they have Japanese friends who are outstanding businessmen, although they themselves haven't visited Japan too often.

The number of managers who organize quality control groups within the company and strive for the improvement of quality has increased also in American business.

There are definite signs that the day is approaching when the American corporations with persevering strength and extensive resources will cast off their pride at being the originator.

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CSO: 8129/0488

SCIENCE AND TECHNOLOGY

AJINOMOTO'S BIOTECHNOLOGICAL R&D ACTIVITIES DESCRIBED

Tokyo SHUKAN BIRION in Japanese 6 Nov 81 pp 72-75

[Article by Kazuaki Taya]

[Text] Among the Japanese food enterprises are high-profit firms such as Suntory and Kirin Brewery. However, Suntory is a whisky manufacturer, and Kirin Brewery is literally a beer manufacturer. Thus, as a "general" food enterprise, there is no business enterprise that surpasses Ajinomoto.

In the third term of 1981, the scale of Ajinomoto sales was 374.3 billion yen. The makeup of sales is led by processed foods, followed by seasonings, fats and oils, amino acids, etc. The sales in 1965 amounted to 54.4 billion yen, less than one-seventh of the 1980 figure. It was a seasoning manufacturer, and the makeup of sales also was centered on seasoning products, namely the large-scale production of Ajinomoto [MSG], which accounted for over 50 percent of the total sales.

Today, 15 years later, it has achieved a great transformation in its posture as a general food manufacturer.

President K. Utada, who took office in June this year, emphasizes a five-column operation--that is, a comprehensive balanced operation of seasonings, fats and oils, processed foods, amino acids, and overseas business. However, as we view objectively the direction in which Ajinomoto is advancing in the 1980's, we may say that growth in the amino acids and overseas categories hold the key. In other words, life sciences and multinational development are the directions in which Ajinomoto is advancing.

On a worldwide base of multilateral development in amino acid technology, Ajinomoto life science is enlarging its prospect for growth with pharmaceuticals. Erental [phonetic], an enteric nutrient marketed after being adopted by the health care program in September, is the first pharmaceutical for Ajinomoto.

Erental is a nutrient which is directly injected into the patient's intestine through a tube before or after surgery. It is the first pharmaceutical of this type. It is estimated that it will grow eventually into a product with a monthly business of 200-300 million yen.

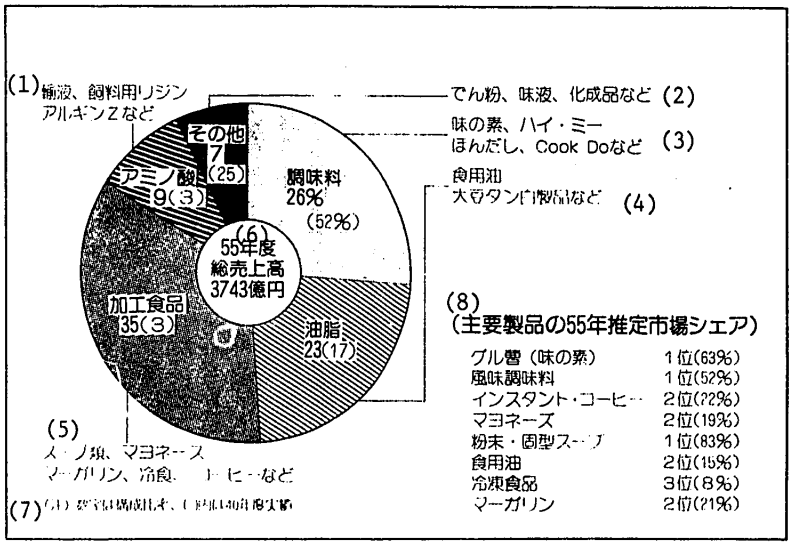

Figure 1. Growth in 1980's Expected in Amino Acid Category

Key:
(1) Amino acids, 9 (3): lysine, algin Z, etc, for transfusion, feeds.
(2) Others, 7 (25): starch, seasoned liquids, synthetic products, etc.
(3) Seasonings, 26 percent (52 percent): Ajinomoto, Hi-Me, Hondashi [broth], Cook Do, etc.
(4) Fats and oils, 23 (17): cooking oil, soybean protein products, etc.
(5) Processed foods, 35 (3): soups, mayonnaise, margarine, frozen foods, coffee, etc.
(6) FY-1980 gross sales: 374.3 billion yen
(7) (Note): Figures represent percentage makeup; inside parentheses are the 1965 figures.
(8) (1980 estimated market share for major products)

Monosodium glutamate (Ajinomoto)	1st place (63 percent)
Flavor enhancer	1st place (52 percent)
Instant coffee	2d place (22 percent)
Mayonnaise	2d place (19 percent)
Powdered/cubed soup	1st place (83 percent)
Cooking oil	2d place (15 percent)
Frozen foods	3d place (8 percent)
Margarine	2d place (21 percent)

Following behind it are the immunologic anticancer agent Rentinan [phonetic], the chemotherapeutic (directly attacks cancer) anticancer agent CAM, and the antibiotic AC-1370. Rentinan [phonetic] was submitted to the Ministry of Health and Welfare for approval last spring, and there is a prospect for obtaining approval in 1982. CAM is about to begin the second-stage clinical testing. Rentinan is an injectable drug, while CAM is being developed as an oral preparation. When both products are marketed, methods for combining the two are anticipated, which will probably become an important factor for increasing sales.

Sales of Erental will be handled by the subsidiary Morishita Seiyaku, while a sales agreement has been arranged with Yamanouchi Pharmaceutical for Rentinan marketing. CAM is a product developed jointly with Chugai Pharmaceutical. We can see Ajinomoto's strategy of expanding agreements with leading pharmaceutical firms using its technological strength as the weapon.

AC-1370 is a new antibiotic of the so-called third-generation antibiotics. It is currently in the animal experiment stage. However, as clinical tests begin, it is fully expected that collaborative studies with major antibiotic manufacturers may be undertaken.

R&D Structure of "High Tech-High Touch"

Anticancer agents and antibiotics have large pharmaceutical markets. As Rentinan, CAM, and AC-1370 join the front, the foundation for Ajinomoto's pharmaceuticals will be strengthened rapidly. Such a posture will probably be seen clearly in some 4-5 years.

The pace of R&D directed at life science at Ajinomoto has increasingly hastened of late.

The objective of some 600 personnel at the central research laboratory is to find seeds for life science to grow in the areas of food, pharmaceuticals, or intermediate medicinal foods.

The number of staff at the central research laboratory at the highest point reached about 1,100 in the period 1965-1974. The fact that the number is now less than 60 percent of that is one of the byproducts brought about by emphasis on efficiency of the R&D effort. In the midst of this, the pharmaceutical developments which were undertaken earnestly for some 7-10 years are about to blossom now in the form of Erental, Rentinan, etc.

In July of this year, the Department of Basic Research, with a staff of 30-40, was newly established in the central laboratory. The objective is to advance broad basic research cross-sectionally with a long-term view.

Furthermore, Ajinomoto has become more forward-looking about mergers in Japan and about technical exchanges with Kellogg (cornflakes), CPC International (soup, mayonnaise), General Foods (coffee), Jerube-Dannon [phonetic] (fresh cheese), etc. In October, it invited Vice President Grant, who is in charge of R&D at the CPC head office, and initiated a "technical exchange meeting" of

three firms, including the top executives of Knoll Foods (merged with CPC). Its plan is to aim for cross-sectional expansion of technological developments in the future by holding broad-based technical exchange meetings which include the above-mentioned collaborators and merger firms.

Last year, jointly with General Foods, which is a partner financier of AGF (Ajinomoto-General Foods), it established a separate new company for the development of protein foods.

In the midst of rising interest in the fields of physiology, nutrition science, and immunology, the life science research at Ajinomoto is expected to show further expansion.

The skillful advance in R&D management such as efficiency, direction, etc, is also a very important point. In this respect, Vice President T. Kakuta, who is in charge of R&D, is emphasizing "high tech-high touch" by quoting from a book by H. Hironaka--that is, a strong human factor in addition to high technology.

A Forerunner in Genetic Engineering Related to Amino Acids

Among life science-oriented areas, the one likely to bring technological innovations is genetic engineering.

In particular, regarding genetic engineering in the area of amino acids, Ajinomoto's posture is aimed at being the forerunner not only in Japan, but in the world. It is also to save face as the world's amino acid enterprise. Unlike others, Ajinomoto is still in the very initial stage in genetic engineering. However, in the fall of last year, it succeeded in the technical achievement of doubling the production efficiency for threonine, one of the essential amino acids, by using a new strain of E. coli in genetic engineering.

Incidentally, between 1971 and 1980 it acquired four prepublication patents which are believed to be related to genetic engineering. This number is the second highest among Japanese firms, after the seven held by Mitsubishi Chemical.

In addition, for 2-3 years it has been sending young researchers, believed to number almost 10, mainly to the United States for genetic engineering related work.

Ajinomoto's achievements in the life sciences area has gradually begun to penetrate overseas. For example, the amino acid sweetener Asparteem is one result. Asparteem [phonetic] is characterized by a sweetness approximately 200 times greater than sugar and yet has fewer calories. It expects to obtain approval of the U.S. FDA (Food and Drug Administration) and begin exporting the product to the United States by next spring. Asparteem is a U.S.-Japan joint merchandise effort, for which the U.S. G. D. Searle has the application patent and Ajinomoto, the manufacturing patent. Other than in the United States, it is being sold in France, Belgium, and Luxembourg. Approval has been obtained in five more countries including Mexico, and approval is being obtained in Canada as well.

Regarding the above-mentioned anticancer agent, Rentinan, it is a noteworthy point for the future that Ajinomoto has already received more than 10 overseas collaborative offers. Regarding amino acids for medical use, which have been exported until now, a plant is expected to be completed in the United States by the end of the year to switch to local production. This is a trend that contributes to overseas business development, which will be discussed next.

In the March 1980 term, Ajinomoto received income totalling 4.4 billion yen (2.9 billion yen for FY-79 in royalties, loan interests and dividends from overseas subsidiaries. Based on the overseas investment and loan balance for the same term of approximately 26 billion yen, the investment efficiency is 17 percent.

Also, based on the fact that the profit contribution of the five overseas subsidiaries is estimated to be approximately 25 percent of the 1980 consolidated profit, it may be concluded that Ajinomoto's overseas firms are developing their business smoothly on the whole.

As of June 1981, Ajinomoto's local plants overseas numbered 12. The local production consists mainly of seasonings, which are produced by six plants, including Thai Ajinomoto. Others include Euro-Lysine (France), a feed lysine; and the manufacturing of instant noodles in four countries, including the United States and Brazil, through collaboration with Nisshin Foods. Also, at the end of this year, a plant for the above-mentioned amino acids for medical use will be completed in the state of North Carolina in the United States as a plant for Ajinomoto USA (sales firm).

Among the overseas firms, the consolidated firms number five, including Thai Ajinomoto, and the total sales of the five firms is approximately 30 billion yen. Total overseas sales, including the sales of other local firms and exports from Japan, were on the scale of approximately 60 billion yen in 1980.

As a result of the considerable expansion made in seasoning plants in the last 1-2 years, the production of monosodium glutamate overseas surpassed that of domestic output during this fiscal year. The average growth rate is also higher overseas than the domestic rate. A new plant for instant noodles was also completed recently in Brazil.

In addition, in preparation for future expansion in sales regions, Ajinomoto they opened resident staff offices this year in Karachi in May, and in Cairo in July, thus placing strategic cornerstones.

Ajinomoto's future production overseas is expected to diversify gradually to processed foods, with seasonings as the base. Also, as found in the case of the local production of amino acids for medical use in the United States, a trend toward an increase in the local production of pharmaceuticals is also expected, mainly in advanced countries.

In such an environment, Ajinomoto's multinational development is likely to show expansion, and the depth will also be increased by product diversification. Depending on circumstances, it is conceivable that the company will move toward buying up business locally.

The history of Ajinomoto's overseas ventures goes back to export pioneering in 1914. Soon after that, it opened a resident staff office in New York.

Local production began in the latter half of the 1950's. Major bases in Southeast Asia, Thai Ajinomoto and Malaysian Ajinomoto, were founded in 1960 and 1961 respectively. Thus, they already have a 20-year history. Malaysian Ajinomoto has already been listed on local stock exchanges, and Thai Ajinomoto is also heading toward listing. Furthermore, a trend toward independent fund procurement by overseas subsidiaries is being emphasized, as in the case of Malaysian Ajinomoto, which is planning to issue stock.

However, this is not to say that Ajinomoto has had no failures in its overseas ventures. Only one such case has occurred, in Italy, where the local factory had to withdraw due to changes in the raw material situation and labor instability (a special loss of 2.6 billion yen was added to the March 1978 term). As multinational development is intensified in the future, how to avoid high-risk countries will hold greater importance than before for Ajinomoto.

The same can be said for pharmaceuticals development. These days, the development of a large-scale pharmaceutical is said to cost "3 billion yen and 10 years." Investment risk in R&D for pharmaceuticals is much greater than food when it fails. However, if it succeeds, the reward is that much greater in fact.

Interview [with Ajinomoto President Utada]

Question: What changes do you envision for Ajinomoto in 10 years?

Utada: People say various things about us, both nothing has changed in that we are basically a food manufacturer. My concept is to expand the business as a whole on the basis of a five-column structure of seasonings, oils and fats, processed foods, amino acids, and overseas venture. A business called Ajinomoto [element of flavor] need not plan such drastic multilateral operations. I would like to make progress with a way of life so that business branches out little by little from the trunk.

Question: Among the five columns, it appears that the importance of amino acids and overseas categories will increase.

Utada: If I am asked specifically which category, I suppose you are right. Amino acids have many more areas to explore yet, and we believe that they will grow into a bright limelight in the next 10 years. Since people's interest in health and nutrition will steadily increase, it is very important to grasp what is new firmly in this regard. As for overseas business, it currently accounts for approximately 20 percent of the consolidated sales. Aside from the figures, there is no doubt that the importance of the overseas category will greatly increase in the next 10 years.

Question: Among multinational developments, buying up businesses is also conceivable, is it not?

Utada: Depending on circumstances, we will naturally consider buying up businesses. Although we are not now practicing this, looking at the years ahead, that need will probably become stronger in Japan also.

Question: Your views on the price of shares?

Utada: I consider that as a top firm in the business, a 4-digit figure--1,000 yen--is not out of line.

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END